

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

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Claim 1: (Currently Amended) ~~The hydrodesulfuration of A process of hydrodesulfurizing a hydrocarbon mixtures mixture, which comprises:~~  
~~reacting said hydrocarbon mixture containing olefins and having a boiling ranges~~  
~~within the range of C<sub>4</sub> to 250° C, containing olefins and having a sulfur content of at least~~  
~~150 ppm of sulfur, with the contemporaneous skeleton isomerization of said olefins, which~~  
~~comprises putting these hydrocarbon mixtures in contact with hydrogen with in the presence~~  
~~of a catalytic composition comprising:~~

- C3
- a) a an acidic carrier of an acid nature consisting of a silica and alumina gel, amorphous to X-rays, with a molar ratio SiO<sub>2</sub>/Al<sub>2</sub>O<sub>3</sub> of 30/1 to 500/1, having a surface area ranging from 500 to 1000 m<sup>2</sup>/g, a porosity of 0.3 to 0.6 ml/g and a pore diameter within the range of 10-40 Å;
  - b) a mixture of metals belonging to Groups VIB and VIII of the Periodic Table, deposited on the carrier in an overall quantity ranging from 2 to 67 % by weight with respect to the total amount of components (a) + (b), thereby effecting said hydrodesulfurization with concomitant skeletal isomerization of the olefins of said mixture.

Claim 2. (Original) The process according to claim 1, wherein the acid carrier of the catalyst has a ratio SiO<sub>2</sub>/Al<sub>2</sub>O<sub>3</sub> ranging from 50/1 to 300/1 and a porosity of 0.4 to 0.5 ml/g.

Claim 3. (Currently Amended) The process according to claim 1, wherein the mixture of metals consists of a metal of ~~group~~ Group VI B and a metal of ~~group~~ Group VIII.

Claim 4. (Currently Amended) The process according to claim 1 or 3, wherein the metal of ~~group~~ Group VI B is selected from the group consisting of molybdenum and tungsten, and the metal of ~~group~~ Group VIII is selected from the group consisting of cobalt and nickel.

Claim 5. (Currently Amended) The process according to claim 4, wherein the metal of ~~group~~ Group VI B is molybdenum, and the metal of ~~group~~ Group VIII is cobalt.

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Claim 6. (Currently Amended) The process according to claim 1 or 3, wherein the metal of ~~group~~ Group VI B is present in a quantity ranging from 5 to 50 % by weight with respect to the total of the carrier and the mixture of metals and the metal of ~~group~~ Group VIII is present in a quantity ranging from 0.5 to 10 % by weight with respect to the total of the carrier and the mixture of metals.

Claim 7. (Currently Amended) The process according to claim 6, wherein the metal of ~~group~~ Group VI B is present in a quantity ranging from 8 to 30 % by weight and the metal of ~~group~~ Group VIII is present in a quantity ranging from 1 to 5 % by weight

Claim 8. (Currently Amended) The process according to claim 1 or 3, wherein the molar ratio of the between metal of ~~group~~ Group VIII and to the metal of ~~group~~ Group VI B is less than or equal to 2.

Claim 9. (Original) The process according to claim 8, wherein the molar ratio is less than or equal to 1.

Claim 10. (Currently Amended) The process according to claim 1 or 3, wherein the silica and alumina gel carrier is ~~used~~ in the form of an extruded product with a ligand.

Claim 11. (Currently Amended) The process according to claim 10, wherein the ligand is selected from the group consisting of aluminum oxide, ~~bohemite boehmite~~ and ~~pseudoboehmite pseudoboehmite~~.

Claim 12. (Currently Amended) The process according to claim 10, wherein the silica and alumina gel carrier and the ligand are premixed in a weight ratios ratio ranging from 30:70 ~~and to~~ 90:10 and consolidated into the desired end-form.

Claim 13. (Currently Amended) The process according to claim 10, wherein the silica and alumina gel in extruded form is prepared as follows:

a) preparing an aqueous solution of a tetraalkylammonium hydroxide (TAA-OH), a soluble compound of aluminum capable of hydrolyzing ~~in to~~  $\text{Al}_2\text{O}_3$  and a silicon compound capable of hydrolyzing ~~in to~~  $\text{SiO}_2$ , in the following molar ratios

$\text{SiO}_2/\text{Al}_2\text{O}_3$  from 30/1 to 500/1;

TAA-OH/ $\text{SiO}_2$  from 0.05/1 to 0.2/1;

$\text{H}_2\text{O}/\text{SiO}_2$  from 5/1 to 40/1;

b) heating the solution thus obtained to cause hydrolysis and gelation ~~and obtain~~ thereby preparing a mixture A with a viscosity ranging from 0.01 to 100 Pa sec;

c) adding to the mixture A first a ligand belonging to the group of ~~bohemites boehmites~~ and ~~pseudoboehmites pseudoboehmites~~, in a weight ratio with the mixture A of

0.05 to 0.5, and then a mineral or organic acid in a quantity ranging from 0.5 to 8 g per 100 g of ligand;

d) mixing and heating the mixture obtained ~~under point in step~~ in step (c) to a temperature ranging from 40° to 90° C until a homogeneous paste is obtained, which is subjected to extrusion; and

e) drying of the extruded product and ~~calcination~~ calcining the dried product in an ~~oxidating~~ oxidizing atmosphere.

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Claim 14. (Currently Amended) The process according to claim 1, which is conducted ~~carried out~~ at a temperature ranging from 220° C to 360° C, at a pressure ranging from 5 to 20 kg/cm<sup>2</sup>, at a WHSV ranging from 1 to 10 hours<sup>-1</sup> and with a quantity of hydrogen ranging from 100 to 500 times the quantity of hydrocarbons present (N1/l).

Claim 15. (Currently Amended) The process according to claim 14, which is conducted ~~carried out~~ at a temperature ranging from 250° C to 330° C, at a pressure ranging from 5 to 10 kg/cm<sup>2</sup>, at a WHSV ranging from 2 to 6 hours<sup>-1</sup> and with a quantity of hydrogen ranging from 200 to 400 times the quantity of hydrocarbons present (N1/l).

Claim 16. (Original) The process according to claim 1, wherein the hydrocarbon mixture which is subjected to desulfuration contains more than 600 ppm of sulfur.

Claim 17. (Currently Amended) The process according to claim 1, wherein the hydrocarbon mixtures mixture which ~~are~~ is subjected to hydrodesulfuration ~~are mixtures~~ having boiling ranges is a mixture that boils that boils within the range of C<sub>5</sub> to 220° C.

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Claim 18. (Currently Amended) The process according to claim 1, wherein the ~~catalysts are~~ catalyst is activated by sulfidation.

CS Claims 19-26. (Canceled)

Claim 27. (New) The process according to claim 1, wherein the hydrocarbon mixture is a full range naphtha having a boiling range of 35° -250° C.

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